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Appl. No. 10/765,808
Amdt. Dated 04/09/2007
Response to Office Action of 04/09/2007

Attorney Docket No.: N1085-00256
[TSMC2003-0899]

REMARKS / ARGUMENTS

Claims 1-12 and 29-33 were previously pending in this application with claims 14-28 having been withdrawn from consideration. The Office Action rejects claims 1-12 and 29-33. In the present paper, claims 1-3, 7-9, 29 and 33 are being amended.

5 Applicants respectfully believe that each of pending claims 1-12 and 29-33 is in patentable form and therefore request re-examination, reconsideration and allowance of each of pending claims 1-12 and 29-33.

I. **Claim Rejections – 35 U.S.C. § 102 and 103**

10 Each of claims 1-12 and 29-33 was rejected under 35 U.S.C. §§ 102 and 103, in various paragraphs of the subject Office Action. Each of these claim rejections is believed overcome for reasons set forth below.

II. **Claims 1-8 and 29 and 33**

15 Claims 1, 8, 29 and 33 are independent claims and each has been rejected under 35 U.S.C. § 103(a) as follows: Claims 1-2, 4-7 and 29-33 were rejected as being unpatentable over Japanese Patent No. 2002009042 A to Kimura in view of Japanese Patent No. 2000208492 A to Yamashita and U.S. Patent No. 5,748,434 to Rossman et al. Claims 3 and 8 were rejected as being unpatentable over Kimura; in view of Rossman. Each of these rejections is believed overcome for reasons set forth below.

20 None of the references teach the feature of *"at least a portion of said focus ring substantially continuously extends underneath a peripheral portion of said chuck"*, such as recited in AMENDED independent claims 1 and 29 which are therefore distinguished from the references. The rejection of claims 1 and 29 under 35 U.S.C. § 103 should therefore be withdrawn. Claims 2, 4-7 and 9-12 depend from claim 1 and these dependent claims are therefore also distinguished from the references of record.

25 None of the identified references teach the feature of *"focus ring set including an upper focus ring that laterally surrounds said chuck and a lower focus ring disposed*

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completely below said upper focus ring and underneath said substrate" such as recited in AMENDED independent claims 8 and 33 which are therefore distinguished from the references of record, taken alone or in combination. The rejection of independent claims 8 and 33 under 35 U.S.C. § 103 and the rejection of claim 3, which depends from claim 8, under 35 U.S.C. § 103, should also be withdrawn.

Claim 33 was also rejected under 35 U.S.C. § 103(a) as being unpatentable over Kimura in view of Yamashita and Rossman and also in view of Japanese Patent No. 2002018126 to Nagaiwa, et al, which was relied upon for providing a focus ring capable of being maintained at a desired temperature. Nagaiwa does not make up for the above-stated deficiencies of the combination of references, i.e. Nagaiwa does not teach: "a lower focus ring disposed completely below said upper focus ring and underneath said substrate". Therefore, claim 33 is distinguished from each of the cited references and the rejection of claim 33 under 35 U.S.C. § 103(a) as being unpatentable over Kimura, Yamashita, Rossman and Nagaiwa, should be withdrawn.

Since each of claims 1-12, 29 and 33 are distinguished from the references of record for reasons set forth above, the rejection of claims 1-12, 29 and 33, under 35 U.S.C. §§ 103, should be withdrawn.

III. Claims 30-32

Claims 30-32 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kimura in view of Yamashita and Rossman. Claim 30 recites the feature of "a **chuck for retaining a substrate and formed of an oxygen-impregnated material**", and a focus ring peripherally surrounding said chuck. The Office action acknowledges that none of the references of record teach the chuck itself being formed of an oxygen-impregnated material.

Applicants respectfully submit that it is NOT obvious, under the conditions of 35 U.S.C. § 103, to form the chuck itself of an oxygen-impregnated material. As previously argued by Applicants, there are different objectives and considerations in selecting the

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materials to be used to manufacture a chuck and a focus ring because they serve different functions.

In paragraph 17 of the subject Office Action, the Examiner states that *"it would have been obvious to one of ordinary skill in the art to form a chuck (or any other part of the etching apparatus that may be exposed during processing) of an oxygenated material for the same purpose that the focus ring is taught to be formed of an oxygen-impregnated material"* (Emphasis added) and in paragraph 49 of the subject Office Action, the Examiner states *"Yamashita teaches that the oxygen impregnated construction material is provided so that a processing part exposed to reaction products . . . Such a material would also be beneficial in constructing a chuck in that a chuck is also exposed to the same reaction products and the same wafer being processed"*.

In other words, the Examiner repeatedly refers to Yamashita for suggesting that it would be advantageous to form other components that are exposed to the etching environment, of an oxygen impregnated material. Applicants point out that a chuck is not exposed to the etching environment because the semiconductor wafer rests on and thereby covers, the chuck. Applicants further point out that Yamashita, in the JPO online translation, does not teach a chuck. Since Yamashita does not teach a chuck and since the Examiner alleges that Yamashita suggests forming exposed portions of the etching chamber of an oxygen-impregnated material, Yamashita falls far short of suggesting forming a chuck of an oxygen-impregnated material because it is a component exposed to the etch environment. There would thus be no motivation to modify Yamashita to (a) provide a chuck and (b) form the chuck of an oxygen-impregnated material. The Examiner has not upheld the burden of establishing a prima facie case of obviousness and therefore claim 30 is distinguished from, and not obvious over, Yamashita.

In summary, Applicants submit that the *chuck formed of an oxygen-impregnated material* feature of claim 30 is not taught or suggested by the references. Since the references fail to disclose the claimed feature relied upon, Applicants disagree with the

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Examiner that it would be obvious to modify the references to arrive at the claimed feature. Such is impermissible hindsight reconstruction. Therefore, the rejection under 35 USC §103 of independent claim 30, and dependent claims 31 and 32, which depend from claim 30, should be withdrawn.

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CONCLUSION

Based on the foregoing, each of pending claims 1-12 and 29-33 is in allowable form and the application in condition for allowance, which action is respectfully and expeditiously requested.

5 The Assistant Commissioner for Patents is hereby authorized to charge any fees or credit any excess payment that may be associated with this communication to Deposit Account 04-1679.

Respectfully submitted,

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